

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

To:

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# PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing  
(day/month/year)

03-03-2005

Applicant's or agent's file reference

P1967

**FOR FURTHER ACTION**

See paragraph 2 below

International application No.

PCT/IB2004/003432

International filing date (day/month/year)

20.10.2004

Priority date (day/month/year)

20.10.2003

International Patent Classification (IPC) or both national classification and IPC

B03C 1/00, B03C 1/28, G001N 33/553

Applicant

Bio-Nobile Oy et al

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

## 2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further opinions, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/IB2004/003432

**Box No. I      Basis of this opinion**

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
☐ This opinion has been established on the basis of a translation from the original language into the following language, \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material  
☐ a sequence listing  
☐ table(s) related to the sequence listing
  - b. format of material  
☐ in written format  
☐ in computer readable form
  - c. time of filing/furnishing  
☐ contained in the international application as filed.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

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Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims		YES
	Claims	1 - 3	NO
Inventive step (IS)	Claims		YES
	Claims	1 - 3	NO
Industrial applicability (IA)	Claims	1 - 3	YES
	Claims		NO

2. Citations and explanations:

The invention according to claims 1-3 relates to a magnetic enrichment method in which method the desired biological component is collected from a solution by means of a magnet, which component is thereafter concentrated in a liquid. The invention further relates to a reactor unit for micro particles and to a magnet unit.

The aim of the invention is to solve the problem with performing enrichment from a large volume to a little volume by means of micro particles in a simple and efficient way.

The following documents are cited in the International Search Report:

D1: US 6409925 B1  
D2: WO 8705536 A1  
D3: US 6040192 A  
D4: US 6596162 B2  
D5: US 5053344 A  
D6: US 2003/0062314 A1  
D7: WO 03044537 A1  
D8: EP 1162444 A1  
D9: DE 10063984 A1

Claim 1

Each of the documents D1-D4 shows a magnetic enrichment method wherein the desired biological component is collected from the solution by means of a magnet, which component is thereafter enriched in a liquid. At least one biological

.../...

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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: BOX V.

component is collected in a closed reactor vessel by means of the micro particles or at least one particle attached to the magnet. At least one biological component is enriched in such a manner that the desired component is released into the solution (see the references in the Search Report).

Therefore the invention according to claim 1 is not novel, does not involve an inventive step but is industrially applicable.

Claim 2

Each of the documents D5-D6 shows a reactor unit for micro particles which unit is a closed vessel. It is unclear how the prevailing conditions are made controllable according to claim 2. However, it is considered that the prevailing conditions are controllable in each of the arrangements shown by the documents D5-D6 (see the references in the Search Report).

Therefore the invention according to claim 2 is not novel, does not involve an inventive step but is industrially applicable.

Claim 3

It is unclear how the shape and the location of the magnet unit in the reactor unit are adjusted in a preferable manner to collect the desired biological component. The invention according to claim 3 does not give any technical details concerning how the magnet unit is constituted to achieve a shape and a location of a magnet unit in a preferable manner. Each of the documents D1, D2 and D7 shows that the shape and the location of the magnet unit in the reactor unit are adjusted in a suitable manner for collecting the desired biological component (see the references in the Search Report).

Therefore, the invention according to claim 3 is not novel, does not involve an inventive step but is industrially applicable.

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